Substitute the following paragraph for the paragraph beginning at page 5, line 1: **Figure 4c** is an alternative embodiment of the present invention with a resistive portion of mixed high resistive materials.

A3

Substitute the following paragraph for the paragraph beginning at page 5, line 4: **Figure 4d** is an alternative embodiment of the present invention with a conductive barb in the high resistive portion.

A4

Substitute the following paragraph for the paragraph beginning at page 5, line 7: **Figure 4e** is an alternative embodiment of the present invention with the high resistive portion extending into a hole in the conductive portion.

A5

Substitute the following paragraph for the paragraph beginning at page 5, line 10: **Figure 4f** is an alternative embodiment of the present invention with a high resistive housing.

A6

Substitute the following paragraph for the paragraph beginning at page 5, line 12: **Figure 4g** is an alternative embodiment of the present invention with a high resistive inset in the housing.

A7

Substitute the following paragraph for the paragraph beginning at page 5, line 15: **Figures 4h and 4i** are an alternative embodiment of the present invention with a high resistance inset in the housing.

A8

Substitute the following paragraph for the paragraph beginning at page 5, line 18: **Figure 5** is an illustration of the instant invention utilized on a circuit board.

A9

Substitute the following paragraph for the paragraph beginning at page 5, line 20: **Figure 6** is an illustration of the instant invention being used on a cylindrical connector.

A10

Substitute the following paragraph for the paragraph beginning at page 5, line 22: **Figure 7** is an illustration of the various prior art connectors.

A11

Substitute the following paragraph for the paragraph beginning at page 5, line 28: Referring to **Figure 1**, the preferred embodiment of the connector assembly of the present invention comprises a plug **6** for mating with a corresponding receptacle **8**. It should be recognized that although only one plug contact **7** is shown in detail for simplicity, there are typically at least two or more plug contacts **7** within every plug **6** for mating with corresponding receptacle contacts **15**. The shape of the plug **6** is not central to the present invention. For simplicity, the plug **6** and plug contact **7** are illustrated as rectangular, although those of skill in the art will realize that many other shapes could be used without departing from the spirit of the present invention. The plug contact **7** comprises a conductive portion **14** which can be made from any conductive material, (such as brass, nickel, gold, copper or a superconductor, etc.) and a highly resistive portion **12**. The resistive portion **12** is generally rectangular shaped and extends across the width **W** of the plug contact **7**. The resistive portion **12** comprises a layer of highly resistive material inset into the surface **16** of the plug contact **7**, with a first end **11** of the resistive portion **12** exposed to the receptacle **8** and a second end **13** of the resistive portion **12** in contact with the conductive portion **14**.

A12

Substitute the following paragraph for the paragraph beginning at page 6, line 26: In operation, the first end of the plug **6** is inserted into the cavity of the receptacle **8**. The receptacle contact **15** will make first contact with the resistive portion **12**. Since it is contemplated that the electronic system will be energized, this will permit energy from the electronic system to begin flowing from the receptacle contact **15**, through the resistive portion **12** and into the conductive portion **14** of the plug contact **7**. The

A13

resistive portion **12** reduces the magnitude of voltage pulses such that they will not present errors into the electronic system, as will be explained in detail hereinafter. A portion of the voltage "seen" by the plug **6** will drop across the resistive portion **12**. As the plug **6** is inserted further into the receptacle **8**, the receptacle contact **15** passes along the surface **16** of the resistive portion **12** until it finally reaches the conductive portion **14** of the plug contact **7**. When the plug **6** is fully inserted into the receptacle **8**, the receptacle contact **15** will be in direct contact with the conductive portion **14** of the plug contact **7**. Accordingly, there will be no voltage drop across the resistive portion **12** of the plug contact **7**. With respect to capacitance, the arrangement of the present invention specifically limits the capacitance between the metallic portions of the plug and receptacle contacts **7**, **15**, (it bypasses the high resistance), to an acceptably low level. It does this by minimizing their effective coupling area and the effective dielectric constant between them, which is primarily air.

Substitute the following paragraph for the paragraph beginning at page 8, line 28: **Figure 3** is a graph of the electrical resistance as measured from the end of the plug contact **7**. This graph is based on a resistive portion **12** of a rectangular shape 15 mils wide and 15 mils long. All other parameters were held constant. As shown, the resistance increases as the thickness of the resistive portion **12** increases. Referring to curve **20**, when a resistive portion thickness of 8 mils is used, a resistance of 10 MW is achieved at the first end **11** of the plug contact **7**, which gradually decreases until the second end **13** is reached where the resistance is nominally zero.

Delete the paragraph beginning at page 9, line 10.

Substitute the following paragraph for the paragraph beginning at page 9, line 20: By changing both the resistivity and the geometry of the resistive portion **12**, as those skilled in the art will realize, the present invention can be adapted to different uses and applications. However, it is

also extremely important to reduce the short capacitance to a negligible level. The short capacitance is reduced by keeping the thickness of the inlay **12** relatively thick, (i.e. in applying the present invention to a SCSI Bus, typically approximately 5 mils). By adjusting the resistivity and thickness of the resistive portion, connector assemblies can be created with desirable characteristics by preventing voltage surges for various types of signals and applications.

Substitute the following paragraph for the paragraph beginning at page 10, line 1: Alternative embodiments of the present invention are shown in **Figures 4a-4i**. In the embodiment depicted in **Figure 4a**, the resistive portion **12** has a tapered profile. By varying the shape of the tapered profile of the resistive portion, the resistive transition curves that result as the receptacle contact **15** passes over the resistive portion **12** can be varied as desired for a particular application.

Substitute the following paragraph for the paragraph beginning at page 10, line 9: **Figure 4b** depicts an alternative embodiment with the resistive portion **12** in a stepwise-tapered profile **17**. By varying the steps between the steps, the resistive transition curves can be varied as desired.

Substitute the following paragraph for the paragraph beginning at page 10, line 13: A third alternative embodiment is shown in **Figure 4c**. The resistive portion **12** consists of two or more materials with varying resistivities.

Substitute the following paragraph for the paragraph beginning at page 10, line 16: **Figure 4d**, a fourth alternative embodiment shows, the resistive portion **12** extending from the conducting portion **14**. A conducting barb **18** extends from the conducting body **14** into the resistive portion **12.** A fifth alternative embodiment, **Figure 4e**, has the resistive portion **12** extending into a hole **19** in the conducting portion **14.** As those skilled in the

Conf A15 art will note many other variations are possible without departing from the spirit of the invention. These varying embodiments can be used for varying the resistive transition curves for differing applications.

Substitute the following paragraph for the paragraph beginning at page 10, line 27: **Figure 4f** depicts a sixth embodiment. The conductive body **14** is surrounded by a high resistive housing **30**. Receptacle contact **15** A26 first makes contact with high resistive housing **30**. As the receptacle contact **15** makes contact with conducting portion **14**, the receptacle contact sees essentially no resistance.

Substitute the following paragraph for the paragraph beginning at page 11, line 1: In **Figure 4g**, the housing **30** is non-conductive. A27 However, high resistive portions **12** make initial contact with receptacle contact 15. The high resistive portions **12** are electrically connected and may be physically connected (not shown) to conducting portion **14.**

Substitute the following paragraph for the paragraph beginning at page 11, line 6: **Figures 4h and 4i** depict a plug contact **7** having a A28 housing 85 surrounding a first high resistance **31** portion and a second low resistance portion **32**. Upon full mating, the receptacle contact **15** is in full contact with the low resistance portion **32**.

Substitute the following paragraph for the paragraph beginning at page 11, line 11: **Figure 7** illustrates that the present instant invention may also be used with the contacts on a printed circuit board. The resistive A23 portions **70a-70n** of the instant invention may be employed in one or more plug contacts **72a-72n** on a conventional printed circuit board **71**. **Figure 6** shows that the present invention may be adapted to various shaped applications. For instance, a plug **83** with a cylindrical shape with a resistive portion **81** and conductive portion **82**. Receptacle contacts **84** within the